

Uses of styrene-maleic anhydride resin (SMA) in leather  
Includes patents but not limited to patents only

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 1998 ACS  
RN 9011-13-6 REGISTRY  
CN 2,5-Furandione, polymer with ethenylbenzene (9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN Benzene, ethenyl-, polymer with 2,5-furandione (9CI)  
CN Maleic anhydride, polymer with styrene (8CI)  
OTHER NAMES:  
CN 2,5-Furandione-styrene copolymer  
CN Admast 1000  
CN Arastar 700  
CN DKB 1116  
CN DKB 1117  
CN DKB 218  
CN DKB 218-2  
CN Dylark 111  
CN Dylark 132  
CN Dylark 2000FG  
CN Dylark 230  
CN Dylark 231  
CN Dylark 232-82  
CN Dylark 238  
CN Dylark 290  
CN Dylark 322  
CN Dylark 332  
CN Dylark 378P20  
CN Dylark 387  
CN Dylark 480  
CN Dylark 480P16  
CN Dylark DKB 290  
CN Dylark DPN 9207A  
CN Dytherm M 214  
CN Dytherm X 214  
CN Ecran PE  
CN GSM 1001  
CN GSM 1002  
CN GSM 1004  
CN GSM 101  
CN GSM 151  
CN GSM 503  
CN GSM 505  
CN GSM 601  
CN LPA 39  
CN Lytron 810  
CN Lytron 812  
CN Lytron 822  
CN Maleic acid anhydride-styrene copolymer  
CN Maleic anhydride-styrene copolymer  
CN Maleic anhydride-styrene polymer  
CN Maleic anhydride-styrene polymers  
CN Matilit CM 2L  
CN Moremax UG 430  
CN Moremax UG 460  
CN Moremax UG 461  
CN Moremax UG 830  
CN Moremax VG 830  
ADDITIONAL NAMES NOT AVAILABLE IN THIS FORMAT - Use FCN, FIDE, or ALL for  
DISPLAY  
DR 12656-13-2, 37336-66-6, 78321-27-4, 27101-47-9, 39287-85-9,

183076-29-1  
 MF (C8 H8 . C4 H2 O3)x  
 CI PMS, COM  
 PCT Polystyrene, Polyvinyl  
 LC STN Files: AGRICOLA, ASMDATA\*, BIOBUSINESS, BIOSIS, CA, CANCERLIT, CAPLUS, CEN, CHEMCATS, CHEMLIST, CBNB, CIN, CSCHEM, DDFU, DRUGU, EMBASE, IFICDB, IFIPAT, IFIUDB, MEDLINE, MSDS-OHS, PDLCOM\*, PIRA, PLASPEC\*, PROMT, RTECS\*, TOXLINE, TOXLIT, USPATFULL  
 (\*File contains numerically searchable property data)  
 Other Sources: DSL\*\*, TSCA\*\*  
 (\*\*Enter CHEMLIST File for up-to-date regulatory information)  
 CM 1  
 CRN 108-31-6  
 CMF C4 H2 O3



CM 2  
 CRN 100-42-5  
 CMF C8 H8



3959 REFERENCES IN FILE CA (1967 TO DATE)  
 973 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 3968 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L4 ANSWER 1 OF 27 CA COPYRIGHT 1998 ACS  
 AN 128:244808 CA  
 TI Crosslinkable polyurethane composition with good storage stability, processability, and chemical resistance  
 IN Matsumoto, Yasuhiro; Yasuda, Toshio; Takeuchi, Hideyuki  
 PA Dainippon Ink and Chemicals, Inc., Japan  
 SO Jpn. Kokai Tokyo Koho, 14 pp.  
 CODEN: JKXXAF  
 PI JP 10081826 A2 19980331 Heisei  
 → AI JP 96-235057 19960905  
 DT Patent  
 LA Japanese  
 AB Title compn. contains (A) polyurethane contg. hydrolyzable silyl group at side chain and/or terminal point and (B) latent catalyst for hydrolysis or condensation of the silyl group. The compn. is useful for artificial leathers, coatings, adhesives, sealants, etc. Thus, MDI 50, polytetramethylene glycol 100, 1,4-butanediol 10, and .gamma.-(2-aminoethyl)aminopropylmethyldimethoxysilane 4 parts were reacted to give polyurethane contg. silyl group at side chain.

Then, 100 parts of the polyurethane and 0.3 parts triammonium citrate were blended to give storage-stable compn., which was spread on release paper and heated to give film showing excellent chem. resistance.

*Patent*  
→ L4 ANSWER 2 OF 27 CA COPYRIGHT 1998 ACS  
AN 125:171041 CA  
TI Coatings containing styrene-maleic acid (ester) copolymers for shoes  
IN Sakurai, Kyokazu; Shiraishi, Katsuhiko; Hasegawa, Tomoko  
PA Mitsubishi Pencil Co, Japan  
SO Jpn. Kokai Tokkyo Koho, 8 pp.  
CODEN: JKXXAF  
PI JP 08134396 A2 19960528 Heisei  
AI JP 94-292008 19941102  
DT Patent  
LA Japanese  
AB Title storage-stable coatings, useful for natural or synthetic **leather** shoes, contain water, color pigments, bases, and styrene-maleic acid (ester) copolymers. Thus, 60% a compn. of water 53, 25% aq. NH3 7, SMA 1000 20, and TiO2 20% was mixed with water 29, an emulsion contg. Hoechst Wax LP and triethanolamine 10, and a corrosion inhibitor 1% to give a coating material showing good re-dispersibility after leaving for 1 mo.

*Article*  
→ L4 ANSWER 3 OF 27 CA COPYRIGHT 1998 ACS  
AN 124:292806 CA  
TI Development on cattlehide foam type of shoe-vamp **leather**  
AU Wang, Wenyong  
CS Jioaxuo Factory Leather Making, Jioazuo, 454150, Peop. Rep. China  
SO Zhongguo Pige (1995), 24(6), 41-3  
CODEN: ZHPIEL; ISSN: 1001-6813  
DT Journal  
LA Chinese  
AB High-quality shoe-vamp **leather** was manufd. by retanning twice with styrene-maleic anhydride copolymer, amarantite and modified oxazolidine as tanning agents.

*Article*  
→ L4 ANSWER 4 OF 27 CA COPYRIGHT 1998 ACS  
AN 124:32418 CA  
TI Development of cattle hide foam type of shoe-vamp **leather**  
AU Wang, Wenyong  
CS Jioaxuo Factory Leather Manufacture, Jioazuo, 454150, Peop. Rep. China  
SO Zhongguo Pige (1995), 24(5), 41-3  
CODEN: ZHPIEL; ISSN: 1001-6813  
DT Journal  
LA Chinese  
AB To guarantee the quality of shoe-vamp **leather**, cattle **leather** was tanned twice with tanning agents selected from styrene-maleic anhydride copolymer, amarantite, modified oxazolidine, etc.

→ L4 ANSWER 5 OF 27 CA COPYR R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT,  
LI, LU, MC, NL, PT,  
SE  
AI EP 93-116873 19931019  
DT Patent  
LA English  
AB Title compn. comprises a fluoroaliph. radical-contg. agent and a polymer having cyclic carboxylic anhydride groups with the proviso that the compn. does not contain water if the fluoroaliph.

radical-contg. agent is a water-sol. or dispersible polyoxyalkylene compd. and the polymer having cyclic carboxylic anhydride groups is a styrene-maleic anhydrid copolymer or a vinyl acetate-maleic anhydride copolymer. A compn. contg. 80 parts of a fluoroaliph. radical-contg. polymethacrylate and 20 parts of maleic anhydride-octadecene copolymer was applied to a cotton-polyester textile to give 0.3% solids (on fiber) and a spray rating of 100 and oil repellency of 4, compared to 70 and 4, resp., for a compn. contg. only the fluoropolymer. The compns. are less expensive than all fluoropolymer compns., provide water- and oil-repellent properties to substrates, and show high compatibility with the commonly used softeners.

L4 ANSWER 6 OF 27 CA COPYRIGHT 1998 ACS

AN 120:247774 CA

TI Reaction products of polymers of unsaturated dicarboxylic anhydrides with amines or alcohols as fatliquoring and filling agents for **leather**

IN Birkhofer, Hermann; Danisch, Peter; Denzinger, Walter; Hartmann, Heinrich; Greif, Norbert; Oppenlaender, Knut

PA BASF A.-G., Germany

SO Ger. Offen., 10 pp.

CODEN: GWXXBX

BASF PATENT 1998

PI DE 4205839 A1 19930902

AI DE 92-4205839 19920226

DT Patent

LA German

AB Fatliquoring and filling agents for **leather** or hides are prepd. by heating amines of specified structure or alcs. with polymers of mono-unsatd. dicarboxylic anhydrides, optionally contg. vinylarom. compds., vinyl esters, olefins, and/or unsatd. carboxylic acids. Heating a 50:50 ma xylene at 120-130.degree., distg. xylene, and dispersing the product in aq. NaOH (0.75 mol/mol anhydride) gave a 20-25% aq. dispersion with pH 7-8. Heating chrome-tanned cowhide (n aniline dye gave a soft, compliant, well-filled and uniformly dyed leather).

Alcohols  
+ 5 mol  
xylene  
120-130°C

L4 ANSWER 7 OF 27 CA COPYRIGHT 1998 ACS

AN 117:10214 CA

TI Development in the technology of making Huabei-Road goatskin **leather**

AU Zhu, Chengchang; Mai, Lizhi; Jin, Jijun

CS Peop. Rep. China

SO Zhongguo Pige (1991), 20(9), 13-19

CODEN: ZHPIEL; ISSN: 1001-6813

DT Journal

LA Chinese

AB Water soaking, liming, bating, enzyme treatment, tanning, and finishing of goatskin **leather** and the effects of these processes on **leather** properties were discussed. Retanning of goatskin with sulfonated styrene-maleic anhydride copolymer-chrome-glutaraldehyde gave very good results.

AAE

Sulf.

L4 ANSWER 8 OF 27 CA COPYRIGHT 1998 ACS

AN 115:51437 CA

TI Plastic films for automotive interiors

IN Huber-Hesselberger, Josef

PA Alkor G.m.b.H. Kunststoffe, Fed. Rep. Ger.

SO Ger. Offen., 7 pp.

CODEN: GWXXBX

PI DE 3930217 A1 19910314  
AI DE 89-3930217 19890909  
DT Patent  
LA German  
AB Deep-drawable polymer sheets or films of .gtoreq.1 layer (total thickness 200-1500 .mu.m) are comprised of vinyl chloride polymer 15-90%, polymeric plasticizer 1-35%, and other polymers 9-50%, and are fluorinated on .gtoreq.1 side, the surface of which is in contact with a foamed or adhesion layer. Plasticizer migration (fogging) is inhibited and thermal aging resistance is improved for use in automotive interiors. Thus, a plasticized PVC/ABS leather substitute sheet of 1.2 mm thickness was fluorinated with N2 contg. 1-5 vol.% F2 to provide products with reflectometer values (DIN 75 201 fogging test) 93-96%, compared to 68% for the unfluorinated material.

L4 ANSWER 9 OF 27 CA COPYRIGHT 1998 ACS

AN 111:99360 CA

TI Waterproofing and oilproofing treatment enhancement by pre- or posttreatment with amines, resins, polymers, or quaternary ammonium compounds

IN Muench, Norbert; Schloesser, Lothar; Hudec, Gustav

PA Hoechst A.-G., Fed. Rep. Ger.

SO Ger. Offen., 5 pp.

CODEN: are

improved, and the durability of the treatment increased, by treating the leather (either before or simultaneous to the traditional impregnation step with fluorochems

L4 ANSWER 10 OF 27 CA COPYRIGHT 1998 ACS

AN 107:178304 CA

TI Self-polishing preparations for leather

IN Frieser, Erich P.; Pfeifer, Franz

PA Henkel Austria G.m.b.H., Austria

SO Austrian, 6 pp.

CODEN: AUXXAK

PI AT 383822 B 19870825

AI AT 82-2401 19820622

DT Patent

LA German

AB Polishes with good thixotropy, which can be applied from bottles with sponges, contain emulsions (8-15% solids) of montan esters and/or polyethylene waxes and, optionally, acrylate or urethane polymers, softening agents, lanolin, glycerides, fluorocarbons, silicones, 0.01-1% alkali-sol. styrene-maleic anhydride polymer or maleinated rosin, and 15-25% C2-3 alkanol. A suitable polish contained montan ester wax 2.0, polyethylene wax 2.0, lanolin 1.5, acrylate copolymer 3.0, emulsifier 0.3, diethanolamine 0.3, tris(butoxyethyl) phosphate 0.5, maleinated rosin 0.2, iso-PrOH 25.0, and H2O 9.5%.

L4 ANSWER 11 OF 27 CA COPYRIGHT 1998 ACS

AN 107:117009 CA

TI Synthesis and characterization of lacquers based on styrene-acrylic copolymers for applications in leather industry

AU Soundararajan, S.; Reddy, B. S. R.; Rajadurai, S.; Thyagarajan, G.

CS Cent. Leather Res. Inst., Madras, 600 020, India

SO J. Appl. Polym. Sci. (1987), 34(1), 247-59

CODEN: JAPNAB; ISSN: 0021-8995

DT Journal

LA English

AB Styrene was polymd. with Bu acrylate and/or maleic anhydride at

70.degree., using Bz2O2 as an initiator in C6H6-EtOAc in order to prep. lacquers for topcoats for use in the leather industry. Bu acrylate-styrene copolymer was characterized using IR and 13C-NMR spectroscopy. Thermal properties of the polymers were studied by TGA and the integral procedural decompn. temps. of polymers evaluated. The order of reaction and the activation energy for the thermal degrdn. of polystyrene, maleic anhydride-styrene copolymer, and Bu acrylate-maleic anhydride-styrene terpolymer at different temps. were calcd. Mol. wts. were detd. from gel-permeation chromatog. and viscosity measuer

PA Sumitomo Chemical Co., Ltd., Japan; Sumika Color Co., Ltd.

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

PI JP 59030969 A2 19840218 Showa

AI JP 82-137793 19820806

DT Patent

LA Japanese

AB In coloring leather with pigments colorfastness is improved by coloring with aq. mixts. contg. a coloring assistant, pigments, and a synthetic resin emulsion, then treating the leather with an inorg. salt, and finally treating the leather with a fat. Thus, chromed leather was colored with an aq. compn. contg. Rainuru N1440 [90881-26-8] (maleic anhydride-styrene copolymer ester ammonium salt) 1 (solids), 20% C.I. Pigment Red 150 dispersion 5, and Sumikaflex 900 [90881-86-0] (acrylic acid ester-ethylene-vinyl acetate copolymer) 1% (on leather wt.) for 45 min at 45-50.degree.. Aq. 10% Al2(SO4)3 (1.5% on leather wt.) was added to the above liquor, and the leather was colored 30 min at 45.degree., washed, and treated with a hydrocarbon oil to give a supple purple red leather with good lightfastness, washfastness, and crocking-fastness and good leveling.

L4 ANSWER 13 OF 27 CA COPYRIGHT 1998 ACS

AN 99:124409 CA

TI Retanning of leather

IN Hoeher, Lothar; Lach, Dietrich; Streicher, Rolf

PA BASF A.-G., Fed. Rep. Ger.

SO Ger. Offen., 22 pp.

CODEN: GWXXBX

PI DE 3201226 A1 19830728

AI DE 82-3201226 19820116

DT Patent

LA German

AB Mineral-tanned leather is retanned with a polymer contg. 1-17 tertiary or quaternary amino groups/20 carboxy groups to give leather with good dyeability. Thus, a copolymer was prepd. from methacrylic acid 32, N-(dimethylaminopropyl)methacrylamide 18, and acrylonitrile 60 parts, treated with aq. NH3, and used for the retanning of chrome leather. The leather had better dyeability with acid dyes, compared with leather retanned with an acrylic acid-acrylonitrile copolymer.

L4 ANSWER 14 OF 27 CA COPYRIGHT 1998 ACS

AN 98:216702 CA

TI Hygienic properties of fiber substrates for leather substitutes treated with hydrophilic polymers

AU Sokolova, L. P.; Baramboim, N. K.

CS Moates treated with

water-sol. polymers were used to improve the hygienic properties of

leather substitutes. Tests were made with Na CM-cellulose (I) [9004-32-4], polyacryla011-13-6]. Residual moisture after 3 h desorption was higher in

I-treated than in polyacrylamide-treated fabrics. Residual moisture in I-treated fabrics could be decreased by increasing sp. surface and polymer porosity. The vapor permeability of the fabrics was not affected by treatment with <20% water-sol. polymer.

L4 ANSWER 15 OF 27 CA COPYRIGHT 1998 ACS

AN 97:145954 CA

TI Heat-resistant thermoplastic resin compns.

PA Japan Synthetic Rubber Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

PI JP 57078441 A2 19820517 Showa

AI JP 80-155388 19801105

DT Patent

LA Japanese

AB The title compns. are prepd. from PVC [9002-86-2], nitrile rubber, plasticizers, and thermoplastic resins prepd. by a polymn. of alkenylarom. monomers and unsatd. dicarboxylic acid anhydrides (optionally contg. vinyl monomers) in the presence or absence of rubbery polymers. The compns. are useful as leather substitutes in automobiles. Thus, a mixt. of polybutadiene (JSR-BR02L) 155, styrene 850, MEK 400, and benzoyl peroxide 2 g was treated dropwise with a mixt. of 128 g maleic anhydride (I) and 800 g MEK at 50-90.degree., the polymn. product was treated with 5 g 2,2'-methylenebis(4-methyl-6-tert-butylphenol), and solvent and unreacted monomers were stripped to give a thermoplastic resin (15.7% I, 83% yield) contg. 16% rubber. A mixt. of Aron NS-1100 100, NBR 10, the thermoplastic 50, dinonyl phthalate 30, epoxidized soybean oil 10, Pb-based stabilizer 2, and lubricant 2 parts was rolled 5 min at 200.degree., and formed into a 0.75-mm-thick sheet. The sheet had 240% elongation at break (180.degree.), 50% (52%) retention of elongation after 60 h irrads. in a weatherometer at black panel temp. 83.degree. without rain (after 60 h storage at 120.degree.), and 2% fogging on glass at 100.degree., compared with 210%, 52 (54)%, and 35%, resp., when using a resin prepd. in 84% yield from styrene 750, acrylonitrile 250, MEK 1200, and tert-dodecyl mercaptan 3 g.

L4 ANSWER 16 OF 27 CA COPYRIGHT 1998 ACS

AN 95:63704 CA

TI Tannage with aluminum salts. Part III. Preliminary investigations of the interactions with polycarboxylic compounds

AU Cov were used in conjunction with various com. acrylic polymers as an alternative to chrome tanning. The color of the leathers was essentially white, even when .apprx.1% Cr(III) was present at 30-35.degree.. Tear strength of felled sheepskin leather was in excess of the 1976 guidelines which required a max. load at failure of 2 and 3 kg/mm for suede and grain clothing leather, resp.

L4 ANSWER 17 OF 27 CA COPYRIGHT 1998 ACS

AN 95:44074 CA

TI Gas-chromatographic study of a hydrophilic additive made of the oligomeric nitrile rubber SKN-26-1A for poly(vinyl chloride)

AU Baramboim, N. K.; Zolina, L. I.; Fedenyuk, P. V.

CS Mosk. Tekhnol. Legk. Prom., Moscow, USSR

SO Kozh.-Obuvn. Prom-st. (1981), 23(5), 60-2

CODEN: KOOPAJ; ISSN: 0023-4354

DT Journal  
LA Russian  
AB Grafting of oligomeric nitrile rubber with maleic anhydride-styrene copolymer(I) increases significantly the hydrophilicity of rubber-modified PVC [9002-86-2] **leather**. The hydrophilicity of modified SKN 26-1A nitrile rubber was examd. by gas chromatog. using water and C7H16 as polar and nonpolar compds., resp. The retention vol. of water increased with increasing polymer wt. on the sorbent for I-grafted rubber compared to significant decrease of the vol. for the unmodified rubber. The retention of C7H16 increased for the modified rubber and remained unchanged for I-contg. rubber. The temp. affected significantly the hydrophilicity of the rubber. The difference in hydrophilicity of I-grafted rubber was related to the presence of the modified product in acid and salt forms.

L4 ANSWER 18 OF 27 CA COPYRIGHT 1998 ACS

AN 89:75951 CA

TI Grain layer of synthetic leathers

IN Mueck, Eduard; Strachota, Jaroslav; Bogdanovicz, Ladislav; Hlozek, Petr; Spicka, Miroslav; Hvezda, Otto; Horak, Josef

PA Czech.

SO Czech., 2 pp.

CODEN: CZXXA9

PI CS 171336 19780215

AI CS 71-1810 19690926

DT Patent

LA Czech

AB Grain layers for elastomeric **leather** substitutes having enhanced mech. strength and H2O uptake and desorption were prepd. by mixing 80-95% urethane rubber and 5-20% maleic anhydride-styrene copolymer (I) [9011-13-6], optionally contg. 1-25% org. fillers, e.g. PVC, polystyrene, cork chippings, and powd. **leather**, and(or) 0.05-2.0% polyisobutylene lubricant (mol. wt. 1000-2000). Thus, a grain layer prepd. by pprubber.

*Substituted  
synthetic leather*

L4 ANSWER 19 OF 27 CA COPYRIGHT 1998 ACS

AN 86:91965 CA

TI Coatings for fibrous sheet material of polyurethane and oil-like hydrocarbon polymer

IN Muck, Eduard; Strachota, Jaroslav; Hlozek, Petr; Horak, Josef

PA Statni Vyzkumny Ustav Kozedelný, Czech.

SO U.S., 6 pp.

CODEN: USXXAM

PI US 3993618 19761123

AI US 71-177500 19710907

DT Patent

LA English

AB A coating having microporous properties, a good hand, and improved pliability for surface of flexible sheet materials, e.g. **leather** substitutes, was prepd. by incorporating into mixts. of elastomeric substances an oil-like bromopolymer of a low mol. wt. hydrocarbon and optionally an oil-like copolymer of propylene or isobutylene with olefinic or cyclic hydrocarbons or with .alpha.-methylstyrene. Thus, a 20% soln. of urethane rubber 450, a 20% soln. of a 60:30 ethylene-maleic anhydride copolymer [9006-26-2] (mol. wt. .apprx.10,000) 50, isobutylene-octene copolymer [61842-16-8] (av. mol. wt. 1500) 5, and polypropylene [9003-07-0] oil (intrinsic viscosity .apprx.300 cP) 2 parts were dissolved in 42 parts DMF at .apprx.22.degree. and stirred until a homogeneous soln. contg. .apprx.20% dissolved solids was obtained. From this soln. a

*(Full copy provided)*



0.4 mm thick coating was poured onto an endless support sheet, 1 side of which was lined with a thin layer of silicone rubber, the urethane rubber was coagulated by H2O washing, and the org. solvent was washed using further portions of H2O. The film had advantageous phys. and mech. as well as hygienic properties as compared with films coated with elastomers not contg. the mixt. of softening copolymer and homopolymers.

L4 ANSWER 20 OF 27 CA COPYRIGHT 1998 ACS  
AN 84:61231 CA  
TI Polishes for leather products  
IN Takahashi, Mikio; Hirakawa, Tetsuya  
PA Wilson Co., Japan  
SO Japan. Kokai, 9 pp.  
CODEN: JKXXAF  
PI JP 50123737 19750929 Showa  
AI JP 74-30572 19740319  
DT Patent  
LA Japanese  
AB Emulsions (10-25%) of metal-crosslinked polymers of acrylic ised an emulsion contg. 15% metal-crosslinked polyacrylate 71.1, a 15% maleic anhydride-styrene copolymer [9011-13-6] emulsion 11.6, a 15% nonoxidized I emulsion 11.6, di-Bu phthalate 1.6, tributoxylethyl phosphate 1.5, 2-pyrrolidone 0.5, diethylene glycol monoethyl ether 2, and a fluorocarbon surfactant (1%) 1.1 parts.

*Polish 1975  
Formulate*

L4 ANSWER 21 OF 27 CA COPYRIGHT 1998 ACS  
AN 84:32793 CA  
TI Self-polishing agent for shoes and other leather articles subject to distortion  
IN Bischoff, Edelbert; Hessler, Willy  
PA Werner und Mertz G.m.b.H., Ger.  
SO U.S., 6 pp.  
CODEN: USXXAM  
PI US 3912679 19751014  
AI US 72-274722 19720724  
DT Patent  
LA English  
AB A title compn. with better soiling and dirt resistance than conventional polishes and good water resistance contained Primal B 505 [37348-72-4], distilled water, 25% aq. NH4OH, KP 140, SMA 2625 A (maleic anhydride-styrene copolymer) [9011-13-6], Caprolactam [105-60-2], Petrolite 246 (hard wax) Carbitol, FC 128, and silicone defoamer LE 463.

*(Full copy provided)*

*Formulate*

L4 ANSWER 22 OF 27 CA COPYRIGHT 1998 ACS  
AN 79:6409 CA  
TI Bonding of flexible polymer sheets  
IN Mueck, Eduard; Strachota, Jaroslav; Blazek, Ladislav; Rogdanovicz, Ladislav; Hlozek, Petr; Spicka, Miroslav; Hvezda, Otto; Kotasek, Zdenek; Horak, Josef  
SO Czech., 2 pp.  
CODEN: CZXXA9  
PI CS 146692 19721215  
AI CS 69-6480 19690926  
DT Patent  
LA Unavailable  
AB Collagen and polypropylene fiber mats are impregnated with a mixt. of a polyurethane elastomer, a styrene-maleic anhydride copolymer [27101-47-9], polyisobutylene [9003-27-4] oil of mol. wt. 1000-2000,

and DMF or Me<sub>2</sub>SO. The resulting leather substitute is squeezed to .sim.35% pickup, washed with water with simultaneous coagulation, and dried at 115.deg..

L4 ANSWER 23 OF 27 CA COPYRIGHT 1998 ACS

AN 79:6405 CA

TI Arti substitutes were prepd. from combinations of textile support, polymer binder, and filler. E.g., a collagen-polypropylene fiber fleece reinforced with a textile mat which was glued with a latex-casein-chloroprene dispersion. The sheet was dried at 90.deg., immersed in a binder bath according to Czechoslovakian patent 140,012, and coated on the reinforced side with a layer 0.6 mm thick prepd. by homogenizing the following constituents: chrome leather fluff, aq. dispersions of low-mol.-wt. polypropylene [9003-07-0] and carboxylated butadiene-acrylonitrile copolymer, acrylonitrile polymerlatex, urea-formaldehyde condensate [9011-05-6], casein modified with Et acrylate [140-88-5], aq. dispersion of a styrene-maleic anhydride copolymer [27101-47-9], and casein pigment. The product was processed to obtain a texture resembling natural leather.

L4 ANSWER 24 OF 27 CA COPYRIGHT 1998 ACS

AN 78:59437 CA

TI Suede-like synthetic leather

IN Muck, Eduard; Horak, Josef; Strachota, Jaroslav; Boleslav, Jirzi; Grygera, Lubomir; Bogdanovicz, Ladislav; Hvezda, Otto

PA Statni Vyzkumny ustav Kozedelny

SO Ger. Offen., 12 pp.

CODEN: GWXXBX

PI DE 2207534 19721109

PRAI CS 71-3150 19710430

DT Patent

LA German

AB Leather substitutes having the appearance and properties of velour leather are prepd. by impregnating (to 50% solids) a layer of polyester (or collagen and polypropylene) fibers with a mixt. contg. (based on solids) a heat reactive nitrile rubber latex 60, a carboxylated nitrile rubber latex 35, a heat reactive polyacrylate latex 5, an aq. dispersion of polypropylene oil (mol. wt. 800) 10, an ammonia soln. of a maleic anhydride-styrene copolymer [9011-13-6] 6, and a urea-HCHO precondensate 5 parts and contg. a metal complex dye, drying and crosslinking the impregnant at 135.deg., impregnating the fiber layer with 10% of a complex salt of stearic acid and with 1% hexamethylenetetramine, heating the layer at 135.deg., and abrading or combing the surface of the impregnated textile. In 1 case, an acid dye is applied after the crosslinking.

L4 ANSWER 25 OF 27 CA COPYRIGHT 1998 ACS

AN 77:102917 CA

TI Bonding of sheets with aqueous elastomer systems

IN Mueck, Eduard; Blazek, Ladislav; Strachota, Jaroslav; Ambroz, Ludek; Bogdanovicz, Ladislav; Hvezda, Otto; Kotasek, Zdenek

SO Czech., 3 pp.

CODEN: CZXXA9

PI CS 143150 19711015

AI CS 69-4962 19690714

DT Patent

LA Czech

AB Impregnation of collagen-polypropylene fiber mats or viscose webs with nitrile

L4 ANSWER 26 OF 27 CA COPYRIGHT 1998 ACS  
AN 73:16345 CA  
TI Hydrophobization of materials  
IN Shantarovich, P. S.; et al.  
PA Institute of Chemical Physics, Academy of Sciences, U.S.S.R.;  
Central Scientific-Research Institute of the Leather Industry  
SO U.S.S.R.

From: Otkrytiya, Izobret., Prom. Obraztsy, Tovarnye Znaki 1970,  
47(10), 15.

CODEN: URXXAF

PI SU 265063 19700309

AI SU 19670209

DT Patent

LA Russian

AB Materials such as **leather** are waterproofed by treating  
them with the reaction product of an alkali metal glycolate and a  
copolymer of styrene with maleic anhydride or poly(acrylic acid).

L4 ANSWER 27 OF 27 CA COPYRIGHT 1998 ACS

AN 66:30033 CA

TI Effect of a copolymer of styrene and maleic anhydride on properties  
of **leather**

AU Sankin, L. B.; Strakhov, I. P.

CS Technol. Inst. Light Ind., Moscow, USSR

SO Izv. Vyssh. Uchebn. Zaved., Tekhnol. Legk. Prom-sti. (1966), (5),  
46-53

CODEN: IVULAU

DT Journal

LA Russian

AB Treatment of **leather** with synthetic polymers made the  
**leather** water repellent and simultaneously preserved the  
**leather**'s intrinsic permeability to water vapor. A  
copolymer of styrene and maleic anhydride was prepd. in xylene at a  
1:1 monomer ratio. Kid **leather** was treated with 2 or 4%  
copolymer solns. at -20.degree. and pH 5. Best results were  
obtained when treated before tanning. Treated **leather**,  
esp. when treated with 4% copolymer soln., contained a larger no.  
of Cr compds. and the CO<sub>2</sub>H groups of the copolymer were the fixing  
centers of the tanning agent. Elasticity of **leather**  
increased when treated before tanning. The treatment had a double  
effect on the properties of **leather**: (a) the copolymer  
became bonded to **leather** proteins, which decreased mutual  
intermol. attraction of the protein mols. and subsequently sepd.  
them, forming wide spaces between them; and (b) it filled up the  
spaces formed between sepd. protein units. As a result, the  
**leather** became more porous and had reduced shrinking on  
drying.

FILE 'REGISTRY' ENTERED AT 14:46:21 ON 18 NOV 1998

L1 1 S 9011-13-6

FILE 'CA' ENTERED AT 14:47:37 ON 18 NOV 1998

L2 2870 S L1/USES

L3 20505 S LEATHER

L4 27 S L2 AND L3

L5 0 S STYRENE-MALEIC ANHYDRIDE RESINS

L6 12 S STYRENE-MALEIC ANHYDRIDE RESINS

L7 0 S L6/USES

L8 0 S L6 AND L3